

### REMARKS

In the Office Action of January 24, 2007, claims 18-45 were rejected under 35 U.S.C. 101. On page 2 of the Office Action, the Examiner supports this rejection by saying, "The claims disclose a process (method) that manipulates only number abstract concepts or ideas or representing any of the foregoing, the claims are not being applied to an appropriate subject matter (See MPEP 2106 and Interim Guidelines)." Apparently the Examiner is trying to allege that the claimed invention falls within one of the 35 U.S.C. 101 judicial exceptions, i.e., laws of nature, natural phenomena, and abstract ideas (such as mathematical algorithms). See MPEP § 2106(IV)(C) It isn't clear which of the exceptions the Examiner is alleging the claimed invention to fall under, but he appears to be alleging that the claimed invention is either a law of nature or an abstract idea. This is obviously not the case. Claim 18 for example is directed to "A method of impairment mitigation in a communication system comprising: generating at least one error estimate of a signal; determining a channel fidelity metric using the at least one error estimate; generating a branch metric for a decoder; modifying the branch metric based on the channel fidelity metric; and decoding the signal using the modified branch metric." None of the steps of claim 18 constitute either a law of nature or an abstract idea (such as a mathematical algorithm). The Examiner appears to be laboring under a misconception of what constitutes a law of nature, natural phenomenon or abstract idea. Applicant refers the Examiner to section 2106(IV)(C) for examples of the 35 U.S.C. 101 judicial exceptions. The method of claim 18 is not something that already existed in nature, but is rather a process that was invented by the inventors named on the application. Said method has clear utility, namely, for example, to mitigate impairments in a communication system, as recited in the preamble of claim 18. Therefore, claim 18 is patentable subject matter in accordance with 35 U.S.C. § 101.

The Examiner further asserts that the claimed invention must produce a "useful, concrete and tangible result," citing *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02. Applicant submits that the "useful, concrete and tangible result" test is intended to be used in the analysis of claims that are directed to a law of nature, natural phenomenon, or an abstract idea, in order to determine if the invention is a practical application of said law of nature, natural phenomenon, or an abstract idea. See MPEP § 2106(IV)(C)(2). As explained above, the claimed invention here is not a law of nature, natural phenomenon, or an abstract idea. Therefore, the "useful, concrete

and tangible result" test is misapplied here. Nevertheless, Applicant points out that the method of claim 18 does achieve a useful, concrete and tangible result, namely, for example, decoding a signal in a way that mitigates impairment in a communication system. Therefore, claim 18 is patentable subject matter in accordance with 35 U.S.C. § 101.

Claims 19-45 likewise define patentable subject matter for reasons similar to those set forth above with respect to claim 18.

The Examiner also rejected claims 18-45 under 35 U.S.C. 112, first paragraph, saying, "since the claimed invention is not supported by either a an (*sic*) asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention." This is an utterly ridiculous rejection having no basis in fact, law or reason. Applicant traverses the rejection for the reasons set forth above with respect to the 101 rejection.

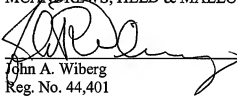
In view of the foregoing, Applicant requests allowance of claims 18-45.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Account No. 13-0017.

Respectfully submitted,

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MCANDREWS, HELD & MALLOY, LTD.

  
John A. Wiberg  
Reg. No. 44,401  
Tel.: 312-775-8000

McAndrews, Held & Malloy, Ltd.  
500 West Madison Street  
34<sup>th</sup> Floor  
Chicago, IL 60661  
Telephone: (312) 775-8000  
Facsimile: (312) 775-8100